



Prof. Alain Wegmann
Solutions for Business / IT Alignment

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SEAM

Collaborative tool
for the co-development of business and IT strategies

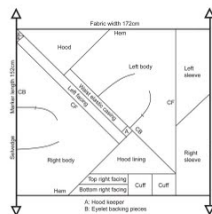
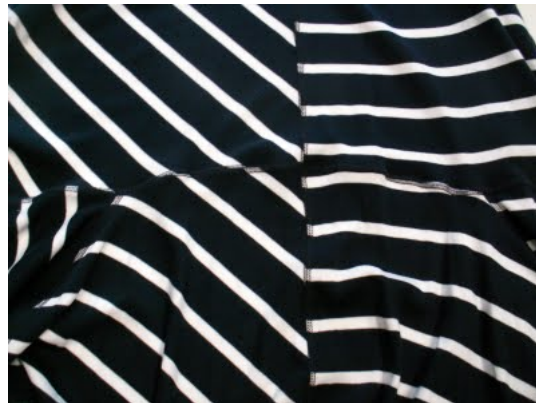


Image: <http://zeroabbreviatefashion.blogspot.com/2009/09/hoodie-attempt-to-explain.html>

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Goals for SEAM



- To be a collaborative tool for developing shared understanding between all business and IT actors.
- Similar to « mind maps » but with more structure to guide the thinking process



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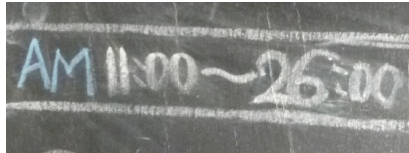
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Cultural Principles



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SEAM Facts Sheet



- Developed since 2003 by Prof. Wegmann's group
- Used for teaching and consulting (business and IT strategies, requirements analysis, team building)
- Based on systems thinking and on formal methods.
- Includes / compatible with: strategic thinking, requirements engineering enterprise architecture, IT architecture, project management, service management, risk management
- Open and public (creative commons)

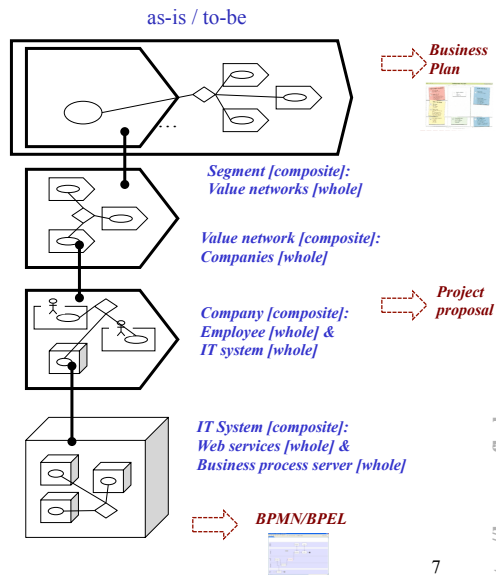
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SEAM Method



- **Systemic**
(hierarchical complex systems, networked organizations)
- **Concrete**
(project-based, story-telling, “examples”, ...)
- **Rigorous**
(discrete simulation, system dynamics, logic)
- **Subject-based**
(viewpoints, goals)



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Credits



- | | |
|-------------------------------|---|
| • Guy Genilloud | - RM-ODP & Alloy |
| • Andrey Naumenko | - PhD 2002 – RM-ODP |
| • Gil Regev | - PhD 2003 – goal modeling |
| • Otto Preiss | - PhD 2004 – quality modeling |
| • Pavel Balabko | - PhD 2005 – role modeling |
| • José Diego de la Cruz | - PhD 2007 – declarative semantics |
| • Irina Rychkova | - PhD 2008 – operational semantics |
| • Lam-Son Lê | - PhD 2008 – system modeling |
| • Arash Golnam | - PhD 2013 - coepetition & business strategy |
| • Anshuman Saxena | - PhD – cognition & value modeling (2009 - ...) |
| • Biljana Bajic | - PhD – SEAM to code (2010 - ...) |
| • Gorica Tapandjieva | - PhD – enterprise architecture (2013 - ...) |
| • George Popescu | - PhD – notation (2013 - ...) |
| • Julien Ramboz | - Tools |
| • Blaise Carrupt | - Tools |
| • <u> </u> | |
| • Gil Regev | - overall SEAM, system thinking (1997 - ...) |

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SEAM Adopters



Business Strategy:



(incl. dizaines de startups)



IT Strategy:



Service Level Management (ITIL):



Organisation IT:



IT Consulting:



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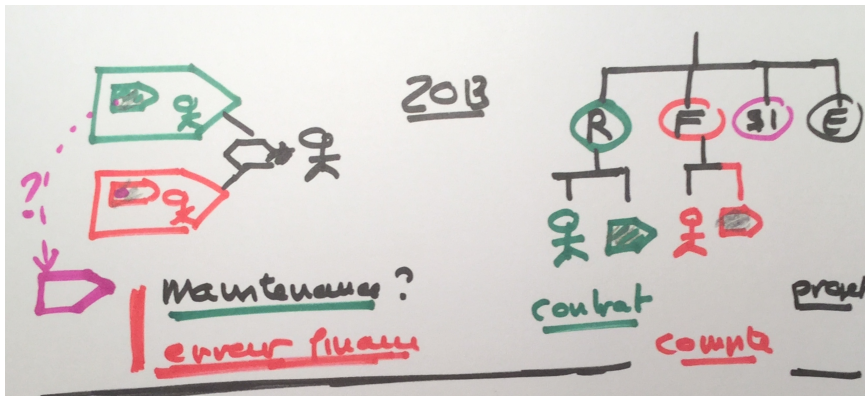


Case Study

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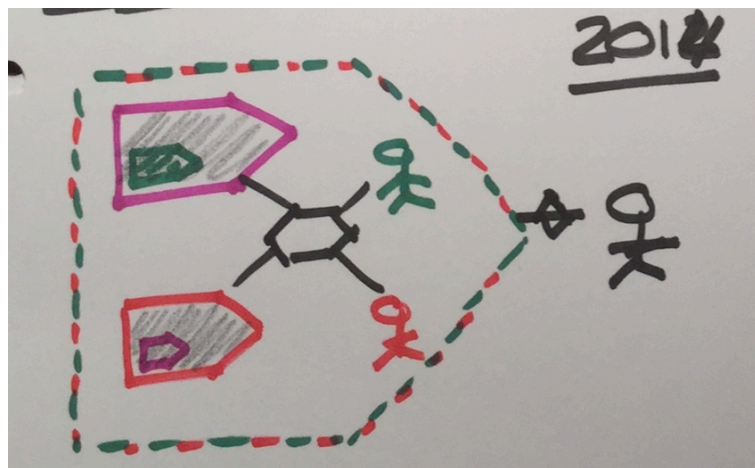
2013



Issue: gray computing – unsecure application

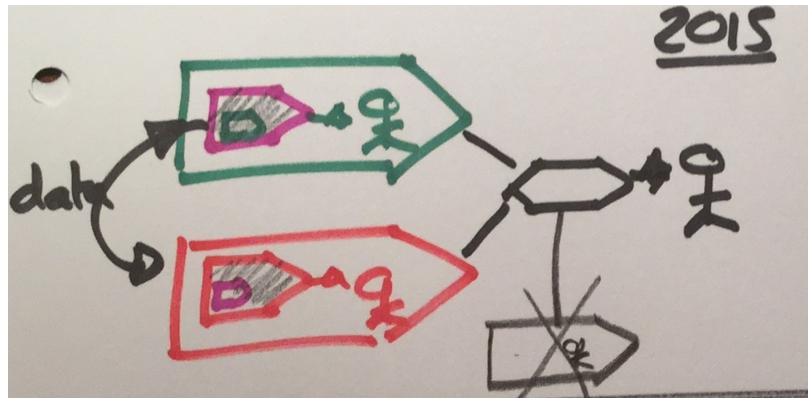
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2014



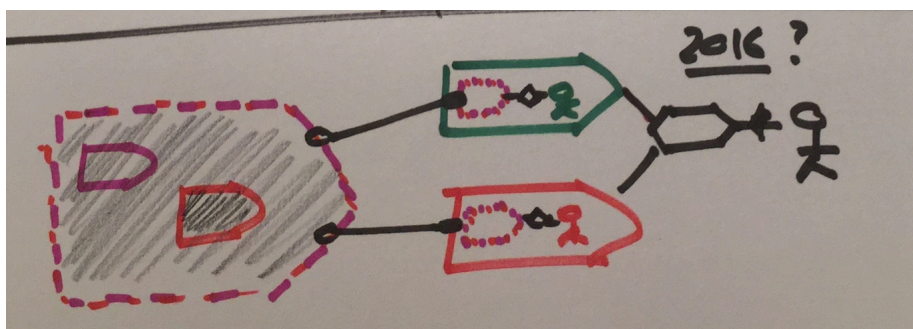
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2015



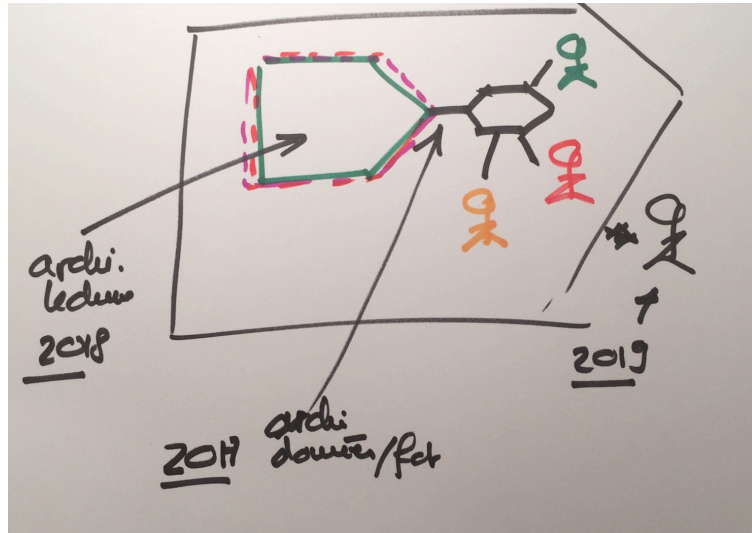
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2016



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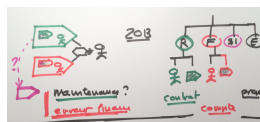
2017 - 2019



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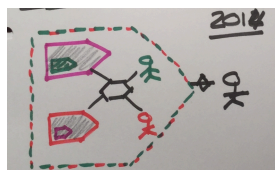
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2013



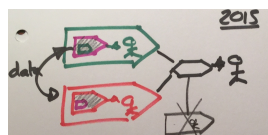
Unsecure application

2014



No agreement on a shared business processes

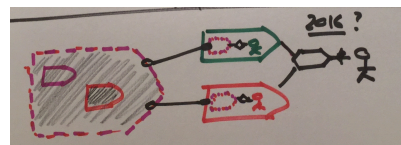
2015



Data coordination, but no architecture

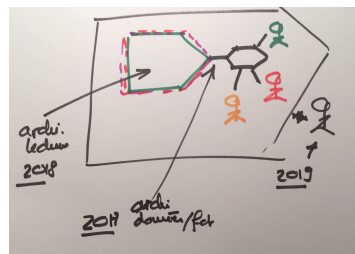
Overview

2016 ?



SI re-organization – one overall IT functional organization

2017 – 2019 ?



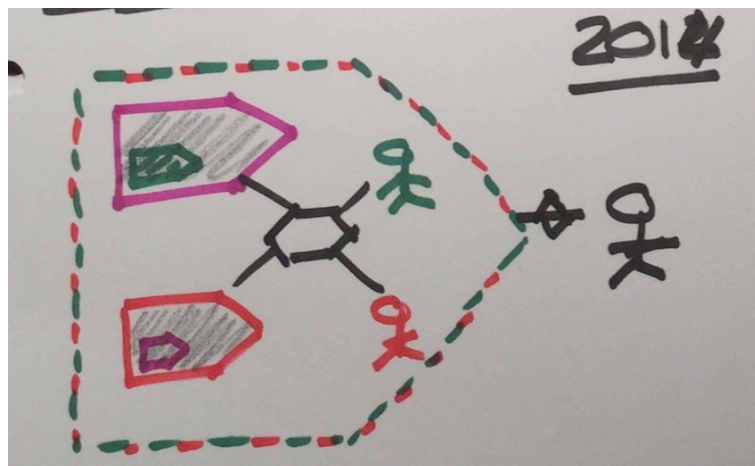
Technical architecture, data architecture, One service for overall project management

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HOMEOSTATIS

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2014



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Homeostasis



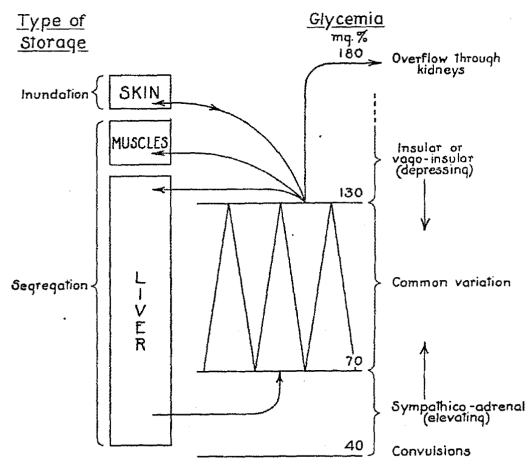
1. “In an open system, such as our bodies ... **agencies are acting or ready to act, to maintain its constancy.**”
2. “If a state remains steady it does so because **any tendency towards change is ... met by increased effectiveness of the factor or factors which resist the change.**”
3. “The regulating system which determines a homeostatic state may comprise **a number of cooperating factors** brought into action at the same time or successively.”
4. “When a factor is known which can shift a homeostatic state in one direction it is reasonable to look for **automatic control** of that factor, or for a factor or factors having an opposite effect.”

Source: Modified from Weinberg, G.M., Weinberg D., General Principles of Systems Design, Dorset House, 1988

1919

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Example: Glycemia Regulation



PHYSIOLOGICAL REVIEWS

Vol. IX JULY, 1929 No. 3

ORGANIZATION FOR PHYSIOLOGICAL HOMEOSTASIS

WALTER B. CANNON

The Laboratories of Physiology in the Harvard Medical School

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Example

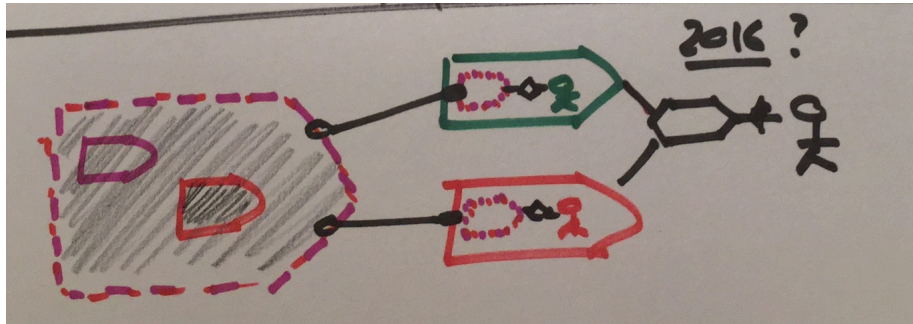
Recherche	BA	top mgt / middle mgt / line
Finance	BA	top mgt / middle mgt / line
SI	BA "i/f"	top mgt / middle mgt / line

BA are not BA but technical people
IT are not technical but business people

SI strategy with SI lead

2ND ORDER CHANGE

2016



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1st & 2nd Order Change

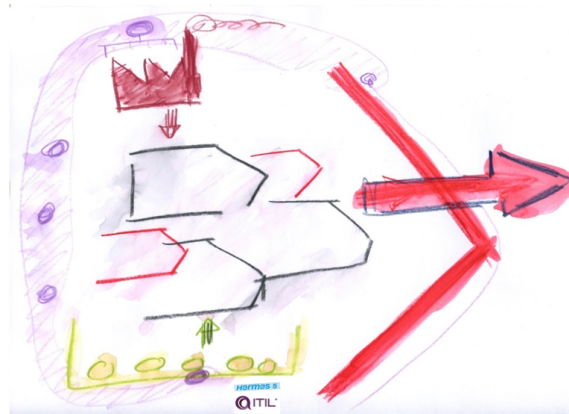
- Changes of 1st order are related to events and facts “as-is”
- Changes of 2nd order are related to the meanings of the changes.

Source: Watzlawick (MRI) referenced by Henri Dorvil “Problèmes sociaux”

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Service Organization



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“PARADIGME EVOLUTIF”

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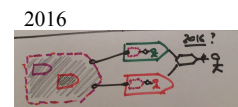
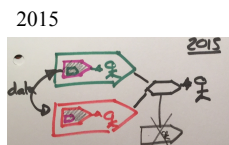
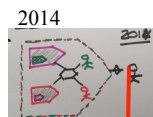
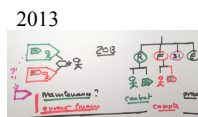
“Paradigme évolutif”

- “La crise est une situation féconde. L’instabilité permet les changements structurels, pour autant qu’un cadre suffisamment protecteur est là pour tenter le changement”.

Source: IDRES, Thérapie d’orientation systémique, 2006

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Conclusion



Need for a social or psychological understanding of changes

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<http://lams.epfl.ch/reference/seam>

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